REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 14-24 remain pending in this application, and are believed to be in condition for allowance for the reasons set forth below.

In the Office Action mailed May 5, 2008,

- Claims 14-17, 19-22 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Diab et al. (US 6,229,856) in view of Peterzell et al. (US 6,694,129); and
- Claims 18 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Diab et al. in view of Peterzell et al. and further in view of Czaja et al. (US 6,567,666.

These grounds of rejection are respectfully traversed.

The present invention provides a mixed signal chip 10 that processes received radio signals of a given one of two communication systems (e.g., UMTS (3G) and GSM (2G)). Based on the given system, the invention selects an appropriate configuration for various components, including, for example, an ADC, Decimator, FIR filter, and Sample Rate Adaption unit. (See Fig. 1 - Fig. 3.)

Claim 14 recites, for example, a "filter" (e.g., FIR filter 24) and an "adjuster" (e.g., Decimator 18 in combination with Sample Rate Adaptation unit 30) that are operated in a prescribed manner to meet the requirements of handling radio signals from different systems, as is discussed in more detail below.

Diab et al. disclose a multi-channel signal demodulation apparatus used in a pulse oximetry system. Diab et al. mainly disclose a premodulation sample rate compression process (1621, 1820) to reduce the complicated design of a postmodulation sample rate compression process (see Diab et al. at Figs. 16 - 18). Diab et al. disclose an Adaptive Algorithm (1850) that is responsive to, e.g., environmental noise, and that selects factors (R1, R2), and filter transfer

functions for an adaptive decimator 1820, 1830, 1834, and 1840 to improve the quality of the output signals (see Diab et al. at col. 29, lines 49-64).

Applicant notes, preliminarily, that the technology field and goals of Diab et al. and that of the claimed invention are entirely different.

The claimed invention is used to process received radio signals of two possible communication systems ("first type," and "second type"), and selects appropriate configurations for sharing various elements (ADC, Decimator, FIR, and Sample Rate Adaption). As such, the presently claimed invention addresses signal response issues, not demodulation issues. In contrast, Diab et al. describe as system that is used to implement a new multi-channel demodulation process by adding premodulation sample compression.

In light of the different technology fields and goals, Diab et al. fail to disclose or to suggest expressly recited limitations in independent claims 14 and 20. Specifically, and firstly, **Diab et al. do not disclose the filter recited in claim 14 or 20.** The filter in claim 14 or 20 must be "capable of filtering the signal **in a first manner which is required when the receiver is of a first type** and **in a second manner which is required when the receiver is of a second type**". For example, when the received signal is consistent with a UMTS system, the filter (FIR) is configured to implement a Raised Root Cosine response in order to meet the requirements of the UMTS standard (see line 14-21, page 6); and when the received signal is consistent with a GSM system, the filter (FIR) is configured to provide an optimal fit for GSM (see line 9-20, page 7). As such, the filter recited in claim 14 is designed to meet the requirements of two different communication systems ("first type," "second type"). In contrast, the filter (LPF) in Diab et al. is used to filter high frequency noise, and is not adjusted in any way to accommodate the requirements of different receiver types.

Secondly, **Diab et al. do not disclose the adjuster in claim 14 or 20.** The adjuster in claim 14 or claim 20 "is adapted to perform adjustments to the sample rate **when the receiver is of the second and not the first type**", where "the adjustments comprise altering the sample rate **before the signal is filtered** to permit the filter to perform filtering in the second manner and altering the sample rate **after the signal has been filtered** to provide the signal with a sample

rate required by the second type of receiver". For example, when the received signal is consistent with a UMTS system, the signal does not need the sample process before or after the signal is filtered (see Fig. 2); but when the received signal is consistent with a GSM system, the signal does need the sample process before and after the signal is filtered (see Fig. 3). Diab et al. describe a methodology that adjusts the factors of predemodulation sample compression and postdemodulation according to environmental noise, which has nothing at all to do with the communication system type. Moreover, Diab et al. always require the sample process, but the claimed invention relies on a sample process only when the receiver is of a second type.

In light of the foregoing, it is quite clear that Diab et al. fail to disclose or to suggest expressly claimed features of the present invention. Applicants further submit that neither Peterzell et al. not Czaja overcomes the deficiencies of Diab et al. presented herein. Consequently, Applicant respectfully requests that the §103(a) rejections of the claims based on the cited prior art of record be reconsidered and withdrawn.

In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone applicants' undersigned representative at the number listed below.

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